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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/033,503	12/27/2001	Ravi K. Kavuri	2001-028-NSC (STK 01028 P	8645
7590 02/18/2005			EXAMINER	
Wayne P. Bailey Storage Technology Corporation MS-4309 One Storage Tek Drive Louisville, CO 80028-4309			FERNANDES, CHERYL M	
			ART UNIT	PAPER NUMBER
			2163	
DATE MAILED: 02/18/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/033,503

Applicant(s)

KAVURI ET AL.

Examiner

Cheryl M Fernandes

Art Unit

2163

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 October 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 December 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. This communication is responsive to the Amendment filed October 20, 2004. Claims 1-20 are presented for examination. Claims 1, 6, 11, and 16 have been amended.

Response to Arguments

2. Applicant's arguments filed October 20, 2004 have been fully considered but they are not persuasive.

Referring to claims 1, 6, 11, and 16, Applicant argues that Nahum fails to teach automatically allocating at least two of a plurality of storage devices to a pool. However, Examiner respectfully disagrees. Nahum clearly teaches allocating storage space in the Storage Pools without any need of human intervention (para. 122), wherein storage area resides in one or more different physical devices (para. 102).

Referring to claims 4, 5, 9, 10, 14, 15, 19, and 20, in response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., virtual volumes as the plurality of storage devices that may themselves be part of a pool) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Claim Rejections - 35 USC § 102

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Claims 1-20 are rejected under 35 U.S.C. 102(e) as being anticipated by US Publication Number 2003/0236945 A1 by Nahum.

Referring to claims 1, 6, 11, and 16, Nahum discloses virtual volume management systems and methods (Abstract; para. 1, 11, 14, 27, 57, and 60) comprising:

- a storage area network ('SAN', para. 11, 14, 57, and 60) comprising a plurality of storage devices ('array of storage devices', para. 11, 14, 57, and 60; 'physical storage devices', para. 64, Fig. 1, element 4) and a plurality of virtual storage volumes available to a user for use in storage and retrieval of user data ('virtual volumes', para. 13, 57), the plurality of storage devices comprising first and second sets of storage devices, wherein the first set of storage devices is of a type different than the second set of storage devices ('different physical storage devices, para. 64); and
- a controller ('Storage Virtualization Manager (SVM)', Abstract; para. 57-61, 68) for:

automatically allocating at least two of the plurality of storage devices to the pool ('Storage Manager module' (Fig. 4, element 50) para. 102, 105-109; 'SVM GUI', para. 110-112, 114, 116, and 122), and linking at least

one of the plurality of virtual storage volumes to the pool (para. 112)¹,

wherein the controller:

partitions the at least two of the plurality of storage devices for storage of user data thereto and retrieval of user data therefrom ('Create Storage Pool' menu, para. 111)².

Referring to claims 2, 7, 12, and 17, Nahum discloses that the plurality of storage devices contain at least one physical disk ('physical Disk Arrays', para. 64).

Referring to claims 3, 8, 13, and 18, Nahum discloses that the plurality of storage devices comprises at least one redundant array of independent disks ('RAID' devices, para. 64).

Referring to claims 4, 9, 14, and 19, Nahum discloses that the plurality of storage devices comprises at least one virtual storage volume (para. 57).

Referring to claims 5, 10, 15, and 20, Nahum discloses that the at least one virtual storage volume comprises at least one virtual disk (para. 122).

¹ The GUI of the Storage Virtualization Manager contains a Virtual Volume Menu whereby the Virtual Volumes are linked to a storage pool.

² The Create Storage Pool menu allows for the choosing of devices that will be part of the storage pool, thereby allowing for the partitioning of devices when allocating to the pool.

Conclusion

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The following patents or publications are cited with respect to automatic allocation of storage devices to a pool:

- US Patent Number 5,907,717 issued to Ellis.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cheryl M Fernandes who can be reached on (571) 272-4018. The examiner can normally be reached on 9:00 am - 5:30 pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Safet Metjahic can be reached on (571) 272-4023. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

CMF
February 14, 2005



UYEN LE
PRIMARY EXAMINER